

# City of Santa Barbara Public Works Department

#### Memorandum

**DATE:** January 11, 2022

**TO:** Mayor and Council

**FROM:** Derrick Bailey, Principal Transportation Engineer

**SUBJECT:** Traffic Conditions Associated with Chick-fil-A Queuing

The purpose of this memorandum is to document the traffic conditions associated with queuing for the Chick-fil-A restaurant drive-through at 3707 State Street and provide a professional opinion on the effects the queuing has on traffic safety and operations.

#### **Executive Summary and Professional Opinion:**

Queuing from the Chick-fil-A drive-through is routinely observed blocking the sidewalk, bike lane, and number two (outside) traffic lane of eastbound State Street. The location and typical queuing area are illustrated in attachment #1.

I have reviewed traffic data and conditions caused by queuing from the Chick-fil-A drive-though. The queuing increases the risk of collisions and injuries, and decreases mobility for all modes of travel by creating a condition that State Street was not intended to accommodate. Based on observations, the queue blocks the number two traffic lane of State Street an average of 70 minutes per day on weekdays, and 92 minutes per day on Saturdays. Chick-fil-A is closed on Sundays.

The queuing is also routinely blocking access to adjacent businesses, which affects the ability for customers and deliveries to access these businesses. For example, the driveway for Rusty's Pizza Parlor (115-feet west of the Chick-fil-A driveway) is blocked an average of 15 times per day.

As a principal arterial street, State Street is intended to provide the highest level of mobility within the City's street network for all modes of travel. The effects of queuing on each mode of travel and the effect on adjacent businesses is described in more detail below in the Analysis section.

Based on the existing environment, I do not believe that a reasonable solution exists to safely accommodate the queue within the public right of way. Further, I do not believe that on-site improvements can be made that will prevent the queue from blocking State Street.

#### **Discussion - Analysis**

Staff set up video recording cameras near the Chick-fil-A drive-through entrance every three months beginning in the spring of 2021. For each video data collection period, two weekdays and Saturdays were recorded (Chick-Fil-A is closed on Sunday). Staff played back the video recordings and noted each time a queue began to form in the street, the time the queue in the street ended, and the maximum length of each queueing event.

Below is an analysis of the following:

- Traffic safety and operations
- Pedestrian safety and mobility
- Cyclist safety and mobility
- Transit safety and operations
- Access to adjacent businesses

#### Traffic Safety and Operations

Mobility of traffic is negatively affected by queuing onto State Street. Each time a queue forms in the street, the eastbound number two traffic lane is blocked and the capacity of that lane effectively becomes zero, thus traffic has only one lane available. The capacity of the number two lane is zero regardless of the length of the queue. In other words, the effect on roadway capacity is the same when a queue has one vehicle in length compared to a queue of ten or more vehicles. In addition, longer queues affect access to adjacent businesses which is described in more detail below.

Findings for the duration of queues blocking the number two lane are summarized below.

**Summary of Observed Duration of Lane Blockage (In Minutes)** 

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	Average Daily Duration of Blockage	Maximum Daily Duration of Blockage	
Weekdays	70 minutes	91 minutes	
Saturday	92 minutes	155 minutes	

The average weekday cumulative duration of queuing onto the street is illustrated in attachment #2. Also shown in attachment #2 is the hourly weekday traffic volumes. The graph in attachment #2 demonstrates the traffic volumes on eastbound State Street are above 1,000 vehicles per hour between 12:00 P.M. and 6:00 P.M. during typical weekdays. The majority of queuing onto State Street coincides with the busiest travel times of typical weekdays.

The average Saturday cumulative duration of queuing onto the street is illustrated in attachment #3. Also shown in attachment #3 is the hourly Saturday traffic volumes. The graph in attachment #3 demonstrates the traffic volumes on eastbound State Street are above 800 vehicles per hour between 11:00 A.M. and 4:00 P.M. on a typical Saturday. The majority of queuing onto State Street coincides with the busiest travel times of typical Saturdays.

In addition to the negative effects on mobility, queuing into the street increases the risk of collisions, particularly rear-end collisions and side-swipe collisions. During the review of video of the queuing, erratic and last second lane changes were observed. Drivers were also observed getting stuck in the queue because they were unable to change lanes. There has been one reported collision to the Santa Barbara Police Department (SBPD) involving a rear end collision with a queued vehicle (11/5/2018).

#### Pedestrian Safety and Mobility

Attachment #4 illustrates what typically happens during queuing on pedestrian access. Queued vehicles persistently block the sidewalk and pedestrian path of travel, thus pedestrians have to deviate from their normal path of travel and maneuver through tightly spaced queued vehicles. This increases the risk of collisions involving pedestrians and also creates a challenging condition for pedestrians with disabilities and mobility challenges. Photos of the sidewalk blockage are contained in attachment #8.

There have been no collisions reported to SBPD associated with queued vehicles involving pedestrians.

#### Cyclists Safety

The State Street bike lanes are one of the most important cycling facilities in the City's cycling network. The 2016 Bicycle Master Plan described State Street as the north/south spine of the City's network.

Attachment #5 illustrates what typically happens during queuing on cycling access. One of two scenarios typically happens:

- 1. Some drivers waiting in the queue will pull to the right, blocking both the bike lane and the number two (outside) traffic lane. This forces cyclists to merge out of the bike lane and into vehicle traffic to bypass the queue. This maneuver puts cyclists at increased risk of collision due to the frequent, erratic and last second lane changing near the queue.
- 2. Some drivers do not block the bike lane, and instead queue only in the number two traffic lane. Cyclists can ride past the queue in the bike lane up to the Chickfil-A driveway, but are exposed to right hook collisions at the driveway entrance.

Both scenarios create dangerous conditions for cyclists. Of all the increased risks of collision and injury to the various modes of travel, I believe that risks to cyclists is

highest due to the persistent queues. It is likely that some cyclists have stopped using State Street due to the conditions created by queuing.

There have been no collisions reported to SBPD associated with queued vehicles involving cyclists.

#### Transit Safety and Operations

Santa Barbara Metropolitan Transit District (Santa Barbara MTD) lines 3, 6, and 11 provide service along this section of State Street. During daytime service hours, there are six scheduled buses that pass Chick-fil-A per hour. Buses generally stop at the Hitchcock bus stop, which is about 260-feet west of the Chick-fil-A driveway.

When there is a queue backing onto State Street, buses must change lanes to bypass the queue. Buses are more difficult to maneuver than passenger vehicles, which increases the risk of collision. The erratic and last second lane changes mentioned above increase the challenges maneuvering transit vehicles through the queueing area. Depending on traffic conditions, the queue can also cause delays to transit vehicles.

Santa Barbara MTD has communicated to City Staff that queuing from the Chick-fil-A parking lot and drive-through creates adverse conditions for transit operations.

Attachment #6 illustrates the location of the Hitchcock bus stop and the proximity to the lane changing zone when queues are present.

#### Access to Nearby Driveways

The driveway to Rusty's Pizza Parlor is located 115- feet west of the Chick-fil-A driveway. A queue that is approximately five vehicles long blocks access to the Rusty's Pizza Parlor driveway.

The driveway to the Educated Car Wash is located 180-feet west of the Chick-fil-A driveway. A queue that is approximately eight vehicles long blocks access to the Educated Car Wash driveway.

The exit driveway for the Jack In The Box drive-through is located 240-feet west of the Chick-fil-A driveway. A queue that is approximately ten vehicles long blocks access to the exit driveway of the Jack In The Box drive-through.

Attachment #7 illustrates the locations of nearby private driveways, and the length of queue that blocks access to these driveways.

As part of Staff's data collection, the maximum queue lengths were noted for each queueing event. The table below summarizes the average number of queuing events that block access to the neighboring businesses' driveways.

	Average Number of Times Per Day That Queues Block Jack In The Box Driveway	Average Number of Times Per Day Queues Block Educated Car Wash Driveway	Average Number of Times Per Day Queues Block Rusty's Pizza Parlor Driveway
Weekday	4	7	15
Saturday	5	6	16

#### Conclusion

Queuing for the Chick-fil-A drive-through increases the risk of collisions and injuries, with the highest risk of injury being for cyclists. Mobility is negatively affected for all modes of travel due to decreased roadway capacity and decreased safety.

As a principal arterial street, State Street is intended to provide the highest level of mobility within the City's street network. Persistent queuing onto State Street is a condition that State Street was not intended for, nor a condition that drivers, cyclists, and pedestrians expect to encounter.

The queuing is also routinely blocking access to adjacent businesses, which affects the ability for customers and deliveries to access these businesses.

Based on the existing environment in the vicinity of Chick-fil-A, I do not believe that a solution exists to safely accommodate the queue within the public right of way.

Further, I do not believe that on-site improvements can be made that will prevent the queue from blocking State Street. Chick-fil-A has proposed to physically reconfigure their onsite circulation to create a dual lane drive-through. Chick-fil-A has been operating a make-shift dual lane drive-through throughout most of the pandemic, and while throughput is likely significantly higher, the queues persist. As Chick-fil-A improves onsite capacity, it appears they are attracting more customers, meaning the queue persists.

Attachment #8 are photographs illustrating queuing conditions.

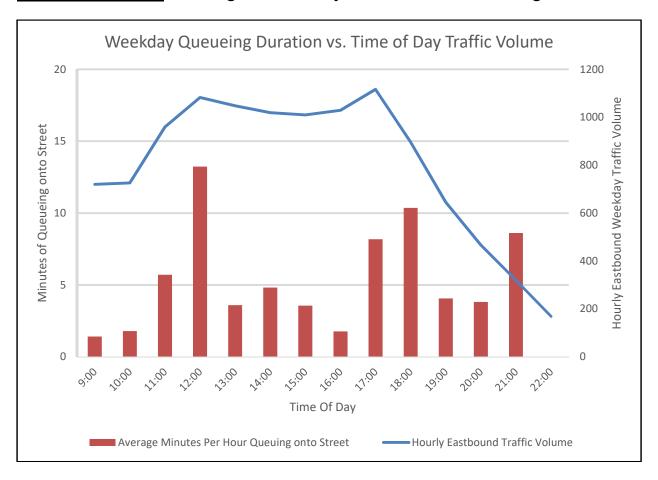
#### **Attachments**

- 1. Site Location and Typical Queue Location
- 2. Average Weekday Cumulative Queuing Duration
- 3. Average Saturday Cumulative Queuing Duration
- 4. Typical Effect of Queuing on Pedestrian Access
- 5. Typical Effect of Queuing on Cycling Access
- 6. Bus Stop Location and Typical Bus Weaving Due to Queuing
- 7. Location of Nearby Private Driveways Affected by Queuing
- 8. Photographs Illustrating Queuing Conditions

## **Attachment #1** - Site Location and Typical Queue Location

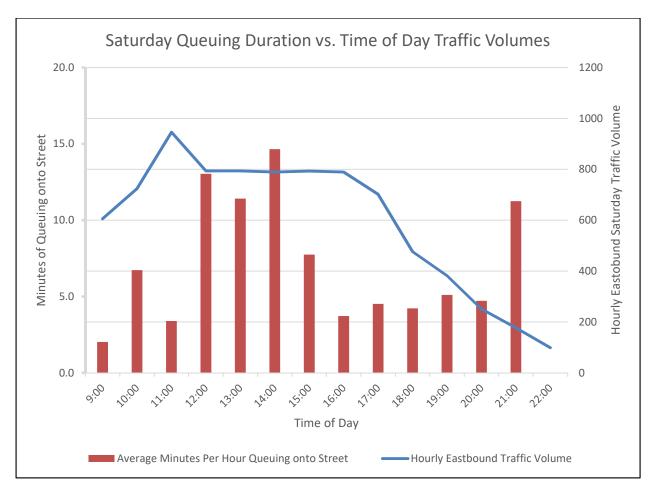


# **Attachment #2** Average Weekday Cumulative Queuing Duration



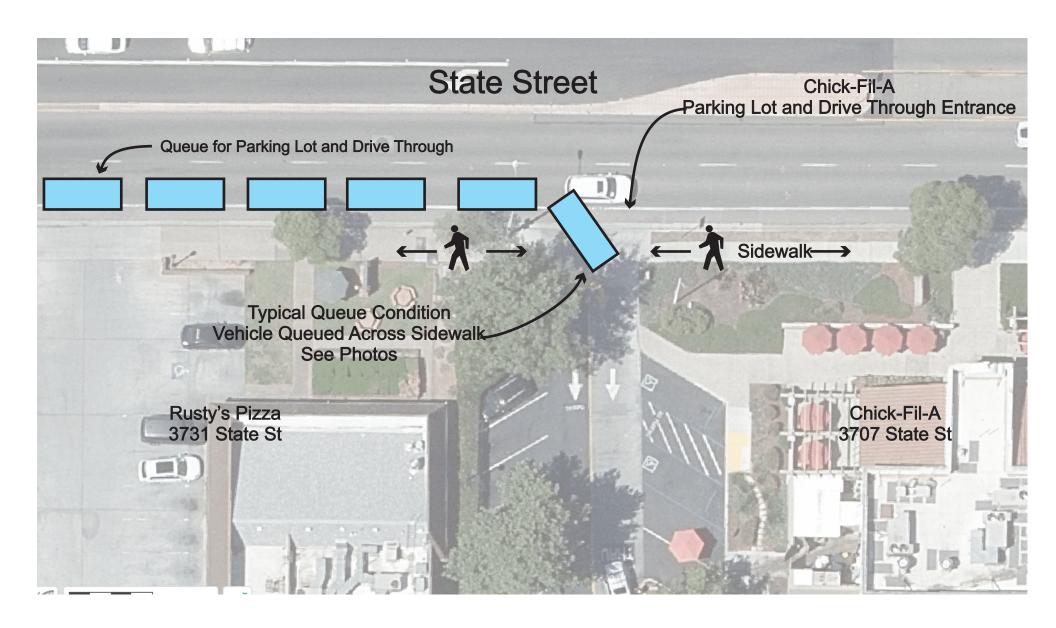
Hour of	Minutes of Queue Per Hour (Weekday)		
Day	Average Observed	Lowest Observed	Highest Observed
9:00	1.4	0.0	8.5
10:00	1.8	0.0	5.5
11:00	5.7	0.6	17.9
12:00	13.2	7.2	17.7
13:00	3.6	0.3	12.1
14:00	4.8	1.5	11.4
15:00	3.6	0.0	8.2
16:00	1.8	0.0	4.0
17:00	8.2	0.0	18.8
18:00	10.4	0.0	32.5
19:00	4.1	0.1	10.6
20:00	3.8	0.0	11.0
21:00	8.6	0.6	18.5
22:00	0.0	0.0	0.0

# **Attachment #3** Average Saturday Cumulative Queuing Duration

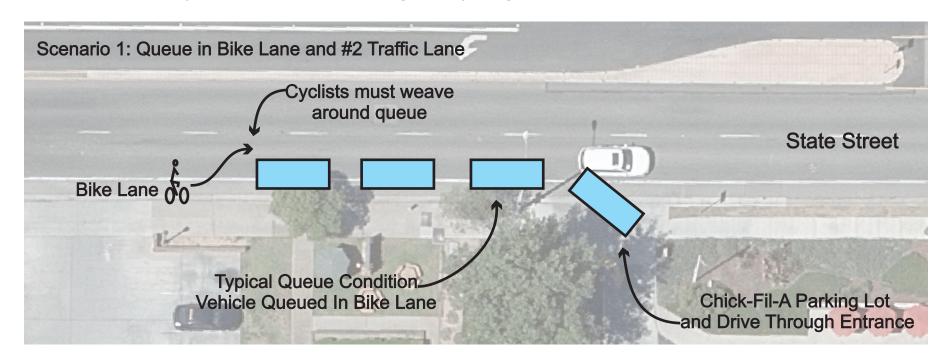


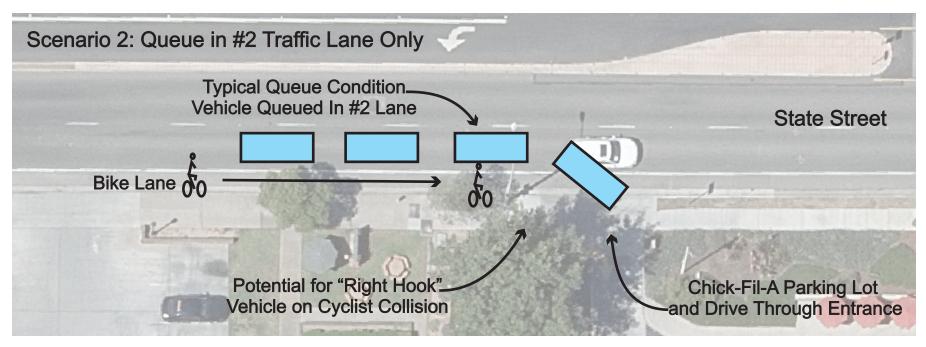
Hour of	Minutes of Queue Per Hour (Saturday)		
Day	Average Observed	Lowest Observed	Highest Observed
9:00	2.0	0.0	6.1
10:00	6.7	0.4	11.4
11:00	3.4	2.6	5.0
12:00	13.0	2.0	25.7
13:00	11.4	3.5	23.8
14:00	14.7	3.5	36.7
15:00	7.7	0.5	22.1
16:00	3.7	0.0	10.5
17:00	4.5	2.1	7.0
18:00	4.2	0.7	10.5
19:00	5.1	0.0	11.4
20:00	4.7	3.0	6.5
21:00	11.2	0.0	31.5
22:00	0.0	0.0	0.0

### **<u>Attachment #4</u>** - Typical Effect of Queuing on Pedestrian Access

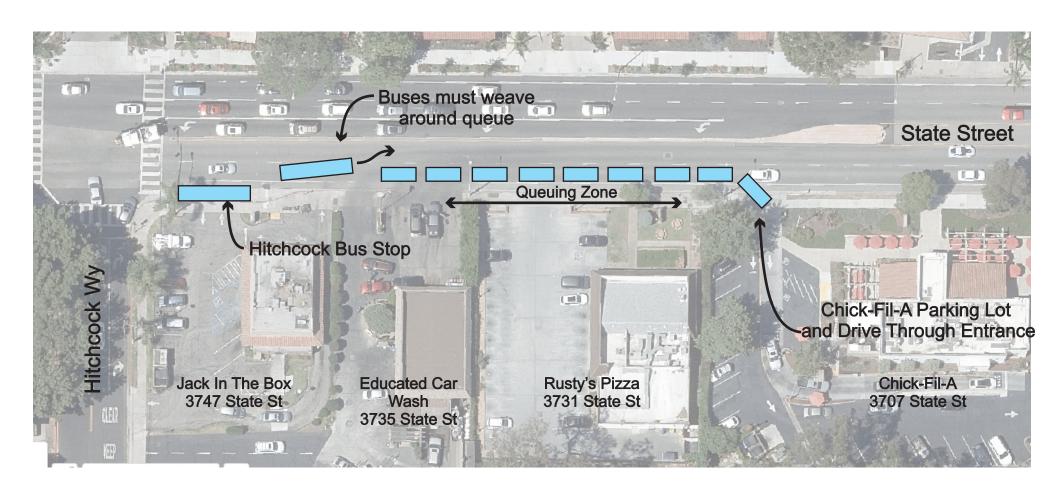


### **Attachment #5** - Typical Effect of Queuing on Cycling Access

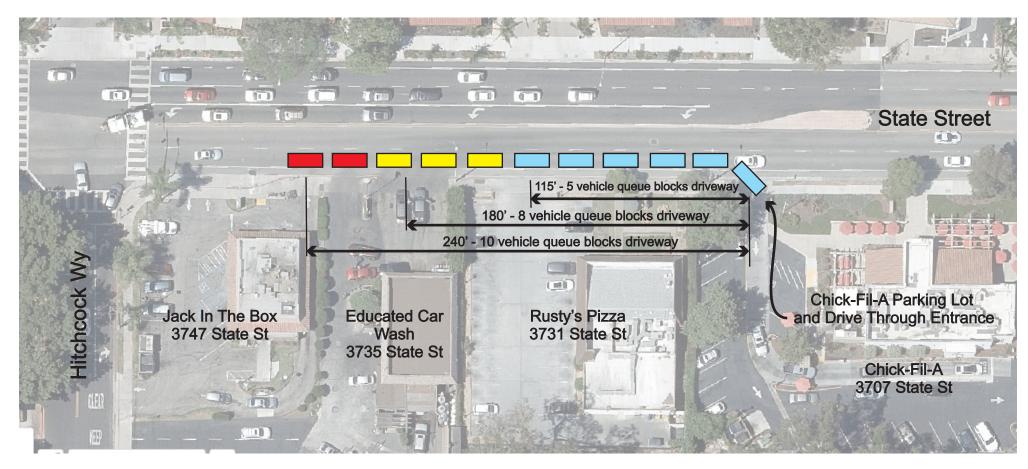




### Attachment #6 - Bus Stop Location and Typical Bus Weaving Due to Queuing



### Attachment #7 - Location of Nearby Private Driveways Affected by Queuing



	Average Number of Times Per Day That Queues Block Jack In The Box Driveway	Average Number of Times Per Day Queues Block Educated Car Wash Driveway	Average Number of Times Per Day Queues Block Rusty's Pizza Parlor Driveway
Weekday	4	7	15
Saturday	5	6	16

## **<u>Attachment #8</u>** - Photographs Illustrating Queuing Conditions



Queue Blocking #2 (Outside) Traffic Lane Access to Rusty's Pizza Parlor Blocked (Shown In Foreground)



Queue Blocking Bike Lane and Sidewalk

# **<u>Attachment #8</u>** - Photographs Illustrating Queuing Conditions



Bus Weaving Around a Single Vehicle in Queue



Bus and Cyclist Weaving Around Queue Sidewalk is Blocked